

SUMMARY CHAPTER IX

HEALTHY TEETH AND GUMS

Dental disease is the nation's leading chronic disease of children and dental disease is largely preventable. Prevention is relatively inexpensive. In 1999, the average cost of treating one tooth with a dental sealant was \$29, compared to the average cost of \$65.09 for one "silver" filling. Lack of insurance, low family income and low parental education level are significantly associated with the lack of preventive dental care.

TENNESSEE DATA



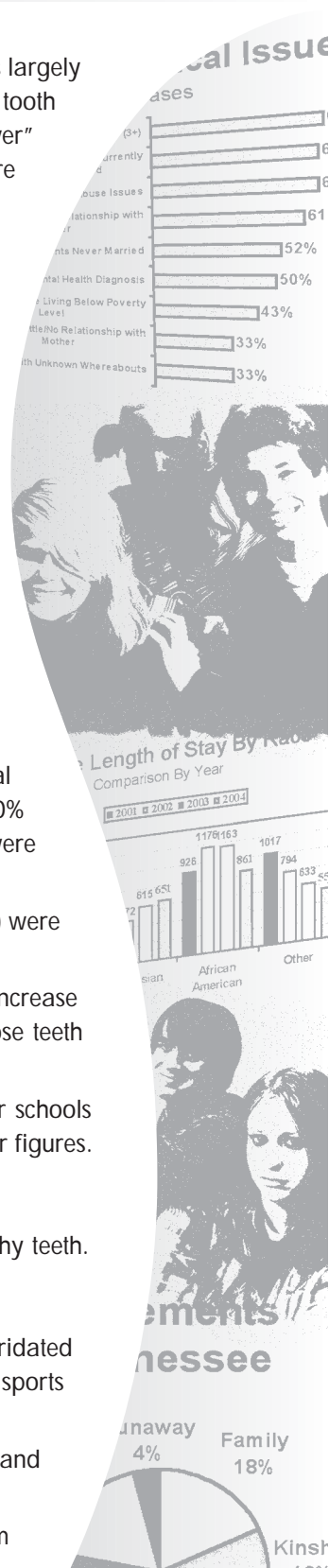
- The TennCare utilization rate among children and youth ages 3-20 has increased from 36% in federal fiscal year 2002 to 51% in federal fiscal year 2004 (Private sector utilization ranges from 50% to 60%). This represents a 42% increase in a two year period.
- The number of participants in the TennCare dental provider network has doubled since 2002. An estimated 25% of all practicing Tennessee dentists are actively participating in the program, and 86% of participating dentists are accepting new patients, indicating additional capacity within Tennessee's existing dental network.
- As a result of greater dentist participation in the TennCare program, patient travel time to the dentist has decreased significantly - average distance from an enrollee to a participating dentist is approximately four miles.
- During July 1, 2003- June 30, 2004, school based dental prevention services were delivered in all 13 regions of the state. Data show that 144,020 children had dental screenings in 381 schools. The number of children screened represents a 40% increase between July 1, 2002 - June 30, 2003. Of these, 42,455 children were referred for unmet dental needs.
- Comprehensive preventive services (including all aspects of the preventive program) were provided in 328 schools. Full dental exams were conducted on 67,719 children.
- A total number of 289,956 teeth were sealed on 47,645 children. This is a 34% increase in the number of teeth sealed and a 17% increase in the number of children whose teeth were sealed over the 2002-2003 fiscal year.
- Approximately 160,000 children received oral health education programs at their schools by a public health hygienist. This is a 26% increase over the 2002-2003 fiscal year figures.

BEST PRACTICES



Preventive oral health is integral to general health and means much more than healthy teeth. Below are several areas of concern:

- *Good nutrition and diet habits:* Many teens are not receiving the benefits of fluoridated water because they are drinking bottled water, and sugared carbonated sodas and sports drinks may contribute to tooth decay.
- *Oral piercing:* Oral piercing can cause infection, chipped or cracked teeth and interference with dental X-rays.
- *Tobacco use:* Using spit tobacco, also known as "chew" or "smoke" can result in gum



recession, tooth decay, oral lesions and oral cancers as well as nicotine addiction.

- *Sports injuries and protective mouth gear:* About one third of all dental injuries and approximately 19 percent of head and face injuries are sports-related.
- *Eating disorders:* Anorexia and bulimia also can result in damage to teeth. Poor nutritional intake associated with anorexia means a loss of calcium. Stomach acids from the constant vomiting symptomatic of bulimia erode the enamel on the teeth.

Experts have suggested the following steps as a start to improving access to oral health services for adolescents.

- Improve access to dental care by expanding preventive care to poor inner-city and rural youth through school-based programs.
- Improve Medicaid coverage for patients and reimbursements for dentists, and provide incentives for dentists to practice in underserved areas.
- Extend dental office hours or provide an on-call service to answer questions.

2010 OBJECTIVES

Increase Access to Dental Care

- By 2010, increase the proportion of Medicaid eligible 3 to 20 year-olds who access dental services to 80%, from the 2003 baseline of 46%.

Reduce Dental Decay

- By 2010, establish baseline data on the proportion of adolescents with untreated decay in their permanent teeth.

Websites

American Cancer Society
www.cancer.org

American Dental Association
www.ada.org

Center for Science in the Public Interest
www.cspinet.org

Center on Human Development and Disability
www.depts.washington.edu/chdd

Child Welfare League of America
www.cwla.org

The David and Lucile Packard Foundation
www.packard.org

Health Care Financing Administration
www.cms.hhs.gov

Health Resources and Services Administration
www.hrsa.gov

Latin American Research and Service Agency (LARASA)
www.larasa.org

National Center for Health Statistics
www.cdc.gov/nchs

National Alliance for Hispanic Health
<http://www.hispanichealth.org/>

National Institute on Drug Abuse
www.nida.nih.gov

National Maternal and Child Oral Health Resource Center
www.mchoralhealth.org

Tennessee Department of Health
<http://www.state.tn.us/health/>

TennCare, Dental Office
http://www.state.tn.us/tenncare/dental/dental_index.htm

US General Accounting Office
www.gao.gov

HEALTHY TEETH AND GUMS

Chapter Preview

This chapter includes a description of:

- The state of dental health in children and adolescents
- Prevention savings and factors other than lack of dental care that affect oral health
- Barriers that adolescents face in trying to access dental care
- Tennessee's public dental health system for children and youth
- Healthy People 2010 goals

Bad teeth, bad breath - just another minor worry for adolescents as they look in the mirror? Actually, dental disease is a significant health hazard which can include decay of the teeth, inflammation of gums and oral tissue and untreated injuries to teeth and jaw. Dental disease is the nation's leading chronic disease of children and the shameful fact is that dental disease is largely preventable.¹ The prescription for healthy teeth is fluoridated water, good nutrition, proper oral hygiene, timely application of dental sealants and regular preventive care. Lack of insurance, low family income and low parental education level are significantly associated with the lack of preventive dental care.²

ORAL HEALTH

NATIONAL DATA



According to the U.S. Surgeon General, 78% of 17-year-olds have experienced tooth decay, and by age 17, more than 7% of children have lost at least one permanent tooth to decay.³ Three percent of adolescents probably have active periodontal disease (inflammation of the gum and soft tissue).⁴ Research in the early part of the 1990's found dental disease in children, who are today's adolescents, disproportionately prevalent among low-income populations⁵ and certain racial and ethnic groups, especially Mexican American and African-American youth.⁶

National studies cited by the U.S. Surgeon General indicate that as many as 20 to 33% of today's adolescents do not see a dentist annually and 2% have never seen a dentist.⁷ Those who have never seen a dentist are more likely to be African-American or Mexican American born outside the United States or uninsured.⁸

Researchers studying adolescents seeking care for non-traumatic dental complaints in the emergency room of a major urban hospital found that children under the age of 13 were more likely to have a regular dental provider than adolescents or young adults. Although almost three-quarters of the patients (71%) identified a primary care physician, only half (50%) identified a regular dentist. The teens reported three primary reasons for going to the emergency room instead of a dental provider: dental office closed (34%), lack of dental insurance/money (17%), and lack of a dentist (16%).⁹ Other youth who may be at particular risk are homeless youth,¹⁰ youth transitioning out of foster care systems¹¹ and those with special health care needs.¹²



TENNESSEE DATA



Tennessee's TennCare program was the first attempt by a state to move its entire Medicaid population into a statewide managed care system. The impact on dental services was disastrous. The number of participating providers dwindled from its 1984 level of more than 1,700 to 386 general and specialist dentists available to treat the more than 600,000 TennCare enrolled children. In 2002, the legislature enacted a statutory carve out of dental services, which mandated a contract arrangement between the state and a private dental carrier (Doral Dental) to administer benefits for children (under age 21). The state retained control of reimbursement rates and increased them to market-based levels.

The new rate structure, in combination with administrative reforms, patient case management strategies and a requirement that the carrier maintain an adequate provider network, has substantially improved TennCare's provision of dental services. The utilization rate among eligible beneficiaries has increased from 36% in federal fiscal year 2002 to 51% in federal fiscal year 2004 (Private sector utilization ranges from 50% to 60%). This represents a 42% increase in a two year period. The number of participants in the dental provider network has doubled since 2002. An estimated 25% of all practicing Tennessee dentists are actively participating in the program, and 86% of participating dentists are accepting new patients, indicating additional capacity within Tennessee's existing dental network.

As a result of greater dentist participation in the TennCare program, patient travel time to the dentist has decreased significantly - average distance from an enrollee to a participating dentist is approximately four miles. Patients are able to locate any general and specialist dentist within any area of Tennessee 24 hours a day every day through the IVR system. Doral customer service representatives also utilize a Geo-Access mapping program to link member zip codes with the nearest dentist who accepts TennCare referrals.

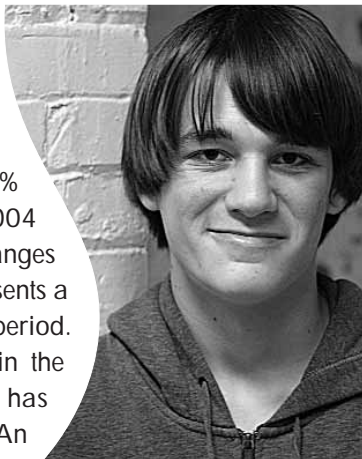
The oral health services provided through the dental carve out are comprehensive, and have not changed

from the former dental TennCare program. Since the carve out was established, there has been an increase in the number of dental treatment services provided, which is associated with the previous unmet dental needs and increased patient demand for services.

TennCare and Doral Dental have built a positive relationship with the Tennessee Dental Association and local dental societies. A Dental Advisory Committee was established to work with the state dental director and Doral Dental on such issues as plan administration and peer review. Doral Dental's professional relations staff provide outreach to Tennessee dentists, providing assistance in program enrollment, billing and policy inquiries, technology support and practice management issues. Seminars are conducted on practice management topics and Doral Dental participates in dental education programs in conjunction with the Tennessee Dental Association. A provider newsletter communicates practice management tips and any changes to program policies and procedures to all participating dentists. Educational information is provided to TennCare enrollees through a member handbook and quarterly member newsletters. The program is also working cooperatively with a wide variety of community-based organizations, including:

- National Healthcare for the Homeless Coalition
- Nashville Taskforce on Immigrants and Refugees
- South Central Head Start Advisory Board
- Tennessee Commission on Children and Youth
- Boys and Girls Clubs
- Nashville Social Services Club; and
- BlueCross BlueShield Member Advisory Panel.¹³

The Tennessee Department of Health's (TDH) School Based Dental Prevention Program is a statewide, comprehensive dental prevention program for children in grades K-8 in schools whose population is 50% or more qualified to receive free and reduced lunch. It consists of three parts; dental screening and referral, dental health education, and application of sealants. During July 1, 2003 - June 30, 2004, school based dental prevention services were being delivered in all 13 regions of the state. Data shows that 144,020 children had dental screenings in 381 schools. The number of children screened represents a 40% increase over the July 1, 2002 - June 30, 2003 fiscal year. Of these, 42,455 children were referred for unmet dental needs.



Comprehensive preventive services (including all aspects of the preventive program) were provided in 328 schools. Full dental exams were conducted on 67,719 children. A total number of 289,956 teeth were sealed on 47,645 children. This is a 34% increase in the number of teeth sealed and a 17% increase in the number of children whose teeth were sealed over the 2002-03 fiscal year. Approximately 160,000 children received oral health education programs at their schools by a public health hygienist. This is a 26% increase over the 02-03 fiscal year figures. Dental outreach activities include provision of informational material for TennCare enrollment purposes and follow-up contacts for all recipients identified as having an urgent unmet dental need.

From July 1, 2004 to February 2005 approximately 3,000 at-risk children have been screened, referred, and had fluoride varnish applied in TDH medical clinics by nursing staff.¹⁴

DENTAL CARE

There are several ways for Tennessee adolescents to access dental care: TennCare, private dental insurance, and fee-for-service payment to private dentists. Each approach includes barriers to access for dental health providers, as well as for teens and their families.

Dental care providers must deal with low reimbursement rates, restrictions on practice, administrative complexity and misconceptions about the importance of preventive dental care. Teens and their families face the cost of private insurance, financial eligibility thresholds, shortages of dentists, shortages of

pediatric dentists, administrative complexity and dentists who may not want to accept their form of payment.¹⁵

Dental services are required under Early, Periodic, Screening, Diagnosis and Treatment (EPSDT) guidelines. Doral Dental is under contract with TennCare to provide these services. Efforts were begun by the Tennessee Department of Health (TDH) in the spring of 2001 to improve access to dental services for low-income Tennessee children and have continued. Over this last fiscal year, TDH has continued to expand its dental program. Specifically, clinical dental programs were enhanced through one-time special needs grants; preventive dental services are now provided statewide through a contract with TennCare; and three mobile dental clinics are providing comprehensive dental services to children in underserved areas.

Access to Dental Care Barriers

Research studies have identified general barriers to accessing dental care, especially for low income youth.

- **Personal, financial and cultural barriers:** Patients face expense (both out-of-pocket and the cost of premiums); a perceived stigma about enrolling in Medicaid (in Tennessee this would be TennCare); inconvenient clinic hours which could result in missed work or school; cultural biases about oral health care; lack of comfort with dental care; and language barriers.
- **Misconceptions and misunderstanding about the importance of dental health:** Because the oral health needs of children and youth are rarely life threatening, many people perceive dental care as an elective service. Dentists report that many low-income patients miss appointments and are not compliant about oral hygiene.
- **Cultural competence:** Researchers note that the relationship between lack of dental care and place of birth (especially where unfluoridated water is in use) emphasizes the need to promote the importance of preventive oral health care and increase outreach to both immigrant teens and adolescent children of immigrants under publicly funded health insurance programs.¹⁶

IT'S MORE THAN JUST TOOTH DECAY

Oral health is integral to general health and means much more than healthy teeth.¹⁷ Adolescents need



TABLE 1

SPIT TOBACCO USE, PERCENTAGE OF HIGH SCHOOL STUDENTS, TENNESSEE AND U.S., 2003

	TN	U.S.
Currently used spit tobacco on one or more of the past 30 days	12.1%	6.7%
Used spit tobacco on school property on one or more of the last 30 days	7.5%	5.9%

Source: Youth Risk Behavior Survey, 2003 and U.S. Youth Risk Behavior Surveillance Survey, 2003.

comprehensive dental services, which include ongoing primary and preventive health care services including reassessments at a minimum of every six months; access to appropriate specialty and subspecialty care; and care for injuries to the teeth and jaw. They also need counseling and guidance on other risks to maintenance of dental health.¹⁸

- **Good nutrition and diet habits:** Many teens are not receiving the benefits of fluoridated water because they are drinking bottled water, carbonated sodas and sports drinks.¹⁹
- **Oral piercing:** Oral piercing can cause infection, chipped or cracked teeth and interference with dental X-rays.²⁰
- **Tobacco use:** Using spit tobacco, also known as “chew” or “smoke”, can result in gum recession, tooth decay, oral lesions and oral cancers as well as nicotine addiction.²¹ Tennessee youth use spit tobacco at almost twice the rate than their peers nationally. (See Table 1)
- **Sports injuries and protective mouth gear:** About one third of all dental injuries and approximately 19% of head and face injuries are sports-related.²² For example, baseball and basketball players are 60 times more likely to sustain an oral injury without a mouth guard.²³
- **Eating disorders:** Anorexia and bulimia also can result in damage to teeth. Poor nutritional intake associated with anorexia means a loss of calcium. Stomach acids from the constant vomiting symptomatic of bulimia erode the enamel on the teeth.²⁴

Use of Spit Tobacco

- Almost twice as many Tennessee high school students have used spit tobacco as the rest of the United States.

- Tennessee high school students more frequently use spit tobacco on school property compared to the national average.
- Tennessee male high school students (21.4%) are almost eight times more likely to use spit tobacco than female students (2.7%).
- White male students (26.6%) are more than five times likely to use spit tobacco than African-American male students (4.7%).²⁵

BEST PRACTICES FOR ORAL HEALTH

Best practices are those strategies, activities or approaches that have been shown through research and evaluation to be effective at preventing and/or delaying a risky/undesired health behavior or conversely, supporting and encouraging a healthy/desired behavior.

Experts have suggested the following as a start to improving the oral health of adolescents:

- Improve access to dental care by expanding preventive care to poor inner-city and rural youth through school-based programs;
- Provide incentives for dentists to practice in underserved areas; and
- Extend dental office hours or provide an on-call service to answer questions.²⁶

Prevention Policies Save Teeth and Money

Most tooth decay in adolescents occurs on the molars, the chewing surfaces of the teeth. Dental sealants are thin plastic coatings, which, when applied to these surfaces, prevent tooth decay by creating a physical barrier against bacterial plaque and food retention.²⁷ In Tennessee, a complete dental sealant treatment (eight molars) costs approximately \$240.00. If properly applied, the sealants can last for many years.²⁸

PREVENTION PAYS



- In 1999, the average cost of treating one tooth with a dental sealant was \$29, compared to the average cost of \$65.09 for one “silver” filling.²⁹
- Dental services cost the U.S. an estimated \$60 billion annually, including visits to the dentist and hospital charges for diseases of the mouth, disorders of the teeth and jaw and sports-related cranio-facial injuries.³⁰

Fluoridated water and application of topical fluoride, such as in a fluoride mouth wash or toothpaste, play a significant role in improving oral health, and in reducing tooth decay in young children by as much as 60% and in permanent adult teeth by nearly 35%. Fluoride is one of the most cost-effective ways of improving oral health. The annual cost of a community water fluoridation system is about \$0.50 per person; topical fluoride application by a dental health provider costs about \$3.35 per tooth, per tooth surface, making fluoride a more economical alternative to a “silver” filling.³¹

End Notes

1. Anthem Blue Cross and Blue Shield Foundation (2000); US Surgeon General, *Oral Health in America: A Report of the Surgeon General* (2000).
2. See resources cited in note 1. See also National Maternal and Child Oral Health Resource Center, *Oral Disease: A Crisis Among Children of Poverty* (1998); Health Resources and Services Administration (HRSA) and Health Care Financing Administration (HCFA), *Oral Health Initiative: Addressing Unmet Oral Health Needs and Disparities to the Underserved* (1999).
3. U.S. Surgeon General, see note 1.
4. National Center for Health Statistics, *Health, United States 2000: With Adolescent Chart Book*, p. 36 (2000); EM Lewitt et al., “Child indicators: Dental health,” *The Future of Children*, 8 (1):133-42, The David and Lucile Packard Foundation (1998).
5. See, e.g., DH Dorfman, B Kastner and RJ Vinci, “Dental concerns unrelated to trauma in the pediatric emergency department,” *Archives of Pediatrics and Adolescent Medicine* 155 (6): 699-703 (2001); US General Accounting Office, *Oral Health: Factors Contributing to Low Use of Dental Services by Low-income Populations* (2000).
6. See, e.g., MR Watson et al., “Caries conditions among 2-5- year-old immigrant Latino children related to parents’ oral health knowledge, opinions and practices,” *Community Dental Oral Epidemiology* 27(1): 8-15 (1999); DL Ronis et al., “Preventive oral health behaviors among African-Americans and whites in Detroit,” *Journal of Public Health Dentistry* 58 (3):234-40 (1998); BL Edelstein. *Racial and Income Disparities in Pediatric Oral Health*, Children's Dental Health Project (1998).
7. SM Yu et al., “Factors associated with use of preventive dental and health services among U.S. adolescents,” *Journal of Adolescent Health* 29(6): 395-405 (2001).
8. US Surgeon General, *Oral Health in America*, see note 1; see also references cited in note 6.
9. See references cited in note 5.
10. M Clark, *Homelessness and Oral Health*, National Maternal and Child Oral Health Resource Center (1999).
11. The Child Welfare League of America, “Dental health is fundamental for foster children,” WeR4Kdz (CWLA online E-bulletin): No. 63 (2001).
12. M Mouradian, ed., *Promoting Oral Health of Children with Neurodevelopmental Disabilities and Other Special Health Needs*, Center on Human Development and Disability, University of Washington (2001); National Maternal and Child Oral Health Resource Center, *Inequalities in Access Oral Health Services for Children and Adolescents with Special Health Care Needs* (2000).
13. *State and Community Models for Improving Access to Dental Care for the Underserved – A White Paper*, October 2004, American Dental Association.
14. 2005 Maternal and Child Health Block grant application.
15. P Ingargiola, *Understanding the Dental Delivery System and How it Differs from the Health Care System*, Anthem Blue Cross and Blue Shield Foundation (2000).

16. 2005 Maternal and Child Health Block Grant application.
17. US Surgeon General, *Oral Health*, see note 1.
18. Ibid.
19. See, e.g., MF Jacobson, *Liquid Candy: How Soft Drinks are Harming Americans' Health*, Center for Science in the Public Interest (1998).
20. American Dental Association, "Oral piercing and health," *Journal of the American Dental Association* 132 (1):127 (2001).
21. American Dental Association, *Chewing Tobacco Increases Risk for Tooth Decay* (1999).
22. Ibid.
23. American Dental Association, *Mouthguards Essential For Today's Female Athlete: Part Time Athletes Also Face Injury Risk* (1999).
24. American Cancer Society, *Can Oral Cavity and Oropharyngeal Cancer be Prevented?* (2001).
25. 2003 Tennessee Youth Risk Behavior Survey.
26. Dorfman et al., "Dental concerns," see note 5.
27. K Kraft and K Holt, eds., *Dental Sealant Resource Guide*, National Center for Education in Maternal and Child Health (2000); National Maternal and Child Oral Health Resource Center, *Preventing Tooth Decay and Saving Teeth With Dental Sealants* (2000).
28. Tennessee Department of Health, Oral Prevention Program, Dr. Suzanne Hubbard, Program Director.
29. National Maternal and Child Health Resource Center, *Preventing Tooth Decay*, see note 17.
30. US Surgeon General, *Oral Health in America*, see note 1.
31. American Dental Association, *Fluoridation Facts* (1999).